

AP:

Homework
9/25 – 9/29

on: Tuesday: test

due: Wednesday:

1. pg. 92 / #15, 16
2. pg. 94 / #37, 39
3. pg. 124 / #7, 10, 25, 27, 37, 39, 40
4. Write an equation of the tangent line to the curve $y = x^2 - 6x + 2$ that is parallel to the line $4x + y = 7$.

Thursday:

1. pg. 93 / #31b
2. pg. 94 / #40
3. pg. 96 / #47
4. pg. 126 / #2, 4
5. Find the slope of the normal line to the curve $f(x) = \frac{2x+3}{x-4}$ at $x = 5$.
6. Let $f(x) = 4x^3 - 3x - 1$:
 - a. Find the x-intercepts of the graph of f .
 - b. Write an equation of the tangent line to the graph of f at $x = 2$.
 - c. Write an equation of the graph that is the reflection across the y-axis of the graph of f .
7. Write an equation or equations of the normal line(s) to the curve $f(x) = x^3 + 3x^2 - 24x + 1$ that is (are) parallel to the y-axis.

Friday: read pp. 127-132

1. The position of a particle is given by $s(t) = t^3 - 6t^2 + 7t - 3$. Find the velocity of the particle at $t = 2$ and the acceleration of the particle at $t = 4$.
2. pg. 137 / #19, 20

Monday:

1. pp. 136-137 / #13, 23, 24
2. A particle moves along the x-axis in such a way that its position at time t for $t \geq 0$ is given by $x(t) = \frac{1}{3}t^3 - 3t^2 + 8t$.
 - a. Show that at $t = 0$ the particle is moving to the right.
 - b. Find all values of t for which the particle is moving to the left.
 - c. Find the velocity and the position of the particle at $t = 3$.
3. A particle moves along the x-axis so that its position at time t is given by $x(t) = (t - 1)(t + 1)^3$. Find the average velocity of the particle for $0 \leq t \leq 2$.

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